

REMARKS

Applicant would like to thank the Examiner for the thorough consideration given to the present application and the courtesies extended to applicant's representative during a telephone interview on December 10, 2002. Claims 8-12, 15-17, 21-26, and 29-44 remain pending in the present application. Claims 8, 16, 29, 39, 40, 41, 42, and 43 have been amended in the present application. The basis for the above amendments may be found throughout the specification, drawings and claims as originally filed. The Examiner is respectfully requested to reconsider and withdraw his rejections in view of the above amendments and remarks as set forth below.

REJECTIONS UNDER 35 USC §102

Claims 8-10, 16, 21-23, 29, 31-32, 37-38, and 39-44 stand rejected under 35 USC §102(b) as being unpatentable over U.S. Patent No. 5,719,647 (Fujikama). Applicant respectfully traverses this rejection.

Fujikama is generally directed to a reflective type liquid crystal display. Of particular interest, Fujikama discloses a pixel electrode 9 connecting to a wiring layer 7 through a contact hole of a first insulating film 16 which is formed on the wiring layer 7. In addition, Fujikama discloses a second insulating film (17) that is disposed on the pixel electrode 9. Applicant notes that the pixel electrode 9 includes no region without insulating film disposed thereon. That is, the entire pixel electrode 8 is overlapped by an insulating film 17.

In contrast, Applicant's claimed invention recites an insulating film that is selectively formed on the wiring layer and underneath a peripheral portion of the pixel electrode.

Specifically, Claim 8 calls for “a pixel electrode connected to the connection portion of said wiring layer, the insulating film disposed underneath an end portion of the pixel electrode, an underside of a central portion of the pixel electrode being free of said insulating film, and the central portion of the pixel electrode extending from the connection portion” in combination with other elements recited in the claim. Therefore, it is respectfully submitted that Claim 8, along with the claims depending therefrom, defines patentable subject matter over Fujikawa. Applicant notes that independent Claims 16 and 29 recite similar subject matter, and thus should be allowable, along with claims depending therefrom, for at least the same reasons as set forth above with respect to Claim 8.

The remaining independent claims also recite limitations directed to this aspect of Applicant's invention. For instance, Claim 39 further recites that “a substantial portion of a top surface of the pixel electrode extending from the connection portion and being free of all insulating material” in combination with other elements recited in the claim. Therefore, it is respectfully submitted that Claim 39, along with the claims depending therefrom, defines patentable subject matter over Fujikawa. Applicant also notes that independent Claims 40, 41, 42 and 43 recite similar subject matter, and thus should be allowable, along with claims depending therefrom, for at least the same reasons as set forth above with respect to Claim 39. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

CONCLUSION

All of the stated grounds for rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and further requests that they be withdrawn. Accordingly, it is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes that personal communication will expedite prosecution of this application, he is invited to telephone the undersigned at (248) 641-1600.

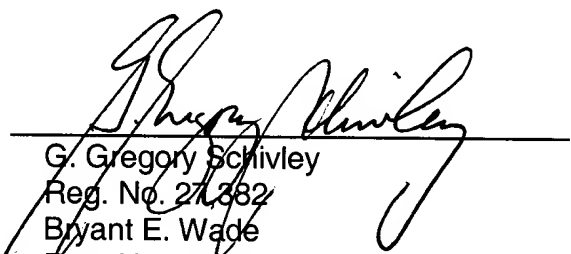
Prompt and favorable consideration of this response is respectfully requested.

Respectfully submitted,

Dated: January 31, 2003

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

8. (Fourth Amendment) A liquid-crystal display device comprising:
- a first substrate having an inner surface;
 - a second substrate having an inner surface;
 - a liquid-crystal layer disposed between said first and second substrates;
 - a wiring layer formed on at least one of said inner surfaces of said first and second substrates, said wiring layer including a connection portion;
 - an insulating film¹⁶ overlapping at least a portion of the wiring layer, the connection portion being free of the insulating film; and
 - a pixel electrode connected to the connection portion of said wiring layer, the insulating film disposed underneath an end portion of the pixel electrode, an underside of a central portion of the pixel electrode being free of said insulating film, and the central portion of the pixel electrode extending from the connection portion [; and
 - an insulating film overlapping at least a portion of the wiring layer, the insulating film not overlapping the connection portion and another area of the pixel electrode, said another area extending from the connection portion].

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16. (Fourth Amendment) A method of forming a liquid-crystal display device comprising:

providing a first substrate having an inner surface;

providing a second substrate having an inner surface;

forming a wiring layer on at least one of said inner surfaces of said first and second substrates, said wiring layer including a connection portion;

forming an insulating film on at least a portion of the wiring layer, the connection portion being free of the insulating film;

forming a pixel electrode that is connected to the connection portion of the wiring layer, the insulating film disposed underneath an end portion of the pixel electrode, an underside of a central portion of the pixel electrode being free of said insulating film, and the central portion of the pixel electrode extending from the connection portion [the insulating film not overlapping the connection portion and another area of the pixel electrode, said another area extending from the connection portion]

29. (Twice Amended) A substrate with an active element, comprising:

a base member;

a wiring layer including a connection portion ;

an insulating film overlapping at least a portion of the wiring layer, the connection portion being free of the insulating film; and

a pixel electrode electrically connected to the connection portion of said wiring layer such that the active element is formed, the insulating film disposed underneath an end portion of the pixel electrode, an underside of a central portion of the pixel electrode

being free of said insulating film, and the central portion of the pixel electrode extending from the connection portion [; and

an insulating film overlapping at least a portion of the wiring layer, the insulating film not overlapping the connection portion and another area of the pixel electrode, said another area extending from the connection portion].

39. (Twice Amended) A substrate with an active element, comprising:

a base member;

a wiring layer including a connection portion;

a pixel electrode electrically connected to the connection portion of said wiring layer such that the active element is formed (the) insulating film disposed underneath an end portion of the pixel electrode, an underside of a central portion of the pixel electrode being free of said insulating film, and the central portion of the pixel electrode extending from the connection portion; and

an insulating film overlapping at least one of the wiring layer and a peripheral portion of the pixel electrode, such that said pixel electrode has a first and a second region, the pixel electrode and the insulating film overlapping each other in the first region and the insulating film not overlapping the connection portion in the second region of the pixel electrode, the second region extending from the connection portion.

40. (Twice Amended) A substrate with an active element, comprising:

a base member;

a wiring layer including a connection portion;

a pixel electrode electrically connected to the connection portion of said wiring layer such that the active element is formed and a substantial portion of a top surface of the pixel electrode extending from the connection portion and being free of all insulating material; and

an insulating film overlapping at least a portion of said wiring layer, such that said pixel electrode has a first and a second region, the pixel electrode and the insulating film overlapping each other in the first region and the insulating film not overlapping the connection portion and the second region of the pixel electrode, the second region extending from the connection portion.

41. (Twice Amended) A substrate with an active element, comprising:

a base member;

a wiring layer including a connection portion;

a pixel electrode electrically connected to the connection portion of said wiring layer such that the active element is formed and a substantial portion of a top surface of the pixel electrode extending from the connection portion and being free of all insulating material; and

an insulating film overlapping at least a peripheral portion of the pixel electrode, such that said pixel electrode has a first and a second region, the pixel electrode and the insulating film overlapping each other in the first region and the insulating film not overlapping the connection portion and the second region of the pixel electrode, the second region extending from the connection portion.

42. (Twice Amended) A substrate with an active element, comprising:

a base member;

a wiring layer including a connection portion;

a pixel electrode electrically connected to the connection portion of said wiring layer such that the active element is formed and a substantial portion of a top surface of the pixel electrode extending from the connection portion and being free of all insulating material; and

an insulating film being arranged so that at least one of said connection portion and said wiring layer overlaps the insulating film, said pixel electrode having a first and a second region, the pixel electrode and the insulating film overlapping each other in the first region and the insulating film not overlapping the connection portion and the second region of the pixel electrode, the second region extending from the connection portion.

43. (Twice Amended) A method of forming a substrate with an active element, comprising the steps of :

providing a base member;

forming a wiring layer including a connection portion;

forming a pixel electrode that electrically connects to the connection portion of said wiring layer such that the active element is formed and a substantial portion of a top surface of the pixel electrode extending from the connection portion and being free of all insulating material; and

forming an insulating film so that at least one of said wiring layer and a peripheral portion of said pixel electrode overlaps the insulating film, wherein the insulating film

does not overlap the connection portion and another area of the pixel electrode, the area extending from the connection portion.